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Reward structures and negotiation strategies: The use of deception in negotiation

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Reward Structures and Negotiation Strategies: The Use of Deception in Negotiation

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Abstract

 This present study investigated the effect of outcome interdependence on different types of deceptions – mutually beneficial and self-interested deception, in a negotiation context. 150 SMU students were recruited to engage in a negotiation task and were randomly assigned to either a high outcome interdependence condition where the monetary reward was awarded based on the points scored by the dyad or a low outcome interdependence condition where the monetary reward was awarded based on the points scored by the individual. The results showed that in a self-rated scale, dyads in the low outcome interdependence condition rated themselves to have engaged in more mutually beneficial and self-interested deception compared to dyads in the high outcome interdependence condition. Similarly, when two blind raters were asked to code the chat for deception, they found that dyads in the low outcome interdependence engaged in more mutually beneficial and self-interested deception, though the former was not statistically significant. Further research is required to examine if outcome interdependence could potentially have a similar effect on other types of deception (e.g. emotional deception) or if the effects would hold across different mediums (e.g. face-to-face vs online).

Keywords: Deception, mutually beneficial deception, self-interested, outcome interdependence, negotiation

"By a lie, a man annihilates his dignity."

—Immanuel Kant (circa 1797)

Circa 420 A.D., St. Augustine famously proclaimed that "every lie is a sin". This uncompromising stance towards deception was perpetuated throughout the centuries, with philosophers the likes of Kant and Homer condemning the act of deception. Much of the existing work on deception appears consistent with this view. Deception has been shown to lead to more disagreements (Roth & Murnighan, 1983; Schweitzer & Croson, 1999), reduce the trustworthiness of the deceiver (Rogers et al., 2017) and cause retaliation from their negotiating partners when it is detected even at the cost of their own benefit (Boles et al., 2000; Croson et al., 2003).

However, ethic scholars have routinely confounded deception with self-serving motives and outcomes. For example, research is often limited to self-motivated behaviors like cheating on one's taxes (e.g. Shu et al., 2012), inflating self-reported performance (e.g., Mazar et al., 2008; Mead et al., 2009; Ruedy et al., 2013), misreporting a random outcome for financial gain (e.g. Shalvi et al., 2011) and lying to a counterpart to exploit them (Koning et al., 2011; Steinel & De Dreu, 2004).

There is a growing pool of research that suggest that this understanding of deception is biased. There has been research demonstrating the positive outcomes of deception. For example, deception has been shown to lead to positive outcomes in negotiation when undetected. Both the individual outcome of the deceiver and the joint outcomes of the pair were higher compared to pairs where there was no deception (Aquino, 1998). Negotiation scholars are also becoming increasing aware of the biased presentation of deception in current negotiation literature (Gaspar et al., 2019; Gunia, 2019) as a majority of studies place a narrow focus on only self-interested informational deception (Aquino, 1998; Boles et al.,

2000; Rogers et al., 2017; Roth & Murnighan, 1983; Steinel & De Dreu, 2004). In their recent paper, Gaspar, Methasani, & Schweitzer (2019) presented a theoretical Deception Consequence Model (DCM) that encompasses three dimensions of deception that researchers can explore to gain a more holistic perspective of research. The three dimensions include intentionality, content and activity. While the DCM also includes the detection of deception, the traits of the negotiators and the negotiation structure, process and contexts, these elements are beyond the scope of this current paper. Rather, this paper seeks to better understand the different strategies that may lead to the adoption of self-interested or prosocial deception.

As such, this paper aims to expand on current findings on deception, particularly in the context of negotiation, by including elements of prosocial deception. While self-interested deception seeks to benefit the deceiver at the expense of the target of deception (Erat & Gneezy, 2012), prosocial deception benefits the target (E. Levine et al., 2018; E. E. Levine & Schweitzer, 2014, 2015). Contrary to the findings on self-interested deception (Rogers et al., 2017), prosocial deception actually increased benevolence-based trust though integrity-based trust was still compromised (E. E. Levine & Schweitzer, 2015). Hence, the existing literature's bias to self-interested informational deception may present a skewed depiction of the effects of deception in negotiation.

The paper also endeavors to integrate outcome interdependence into existing literature on deception. Rewards are ubiquitous in organisations. Selecting the right reward structure is often contingent on one's priorities (e.g. accuracy or speed) and the individuals in the team (Beersma et al., 2003; Hollenbeck et al., 2004). Understanding the link between outcome interdependence and deception could provide an important point for organizations to consider before framing the outcomes of the task.

Deception

Deception is a pervasive and prevalent presence in our daily lives (DePaulo et al., 1996; Hancock et al., 2004). Children begin to lie to their parents from as young as 42 months old (Evans et al., 2011) and employees in an organisation often encounter exaggerated resumes or lying to clients (Shulman, 2007). Among the numerous varied scenarios in which deception can occur, one of the prime context for deception lies in negotiation (Bazerman et al., 2000). Defined as "a form of decision making in which two or more parties talk with one another in an effort to resolve opposing interest" (Pruitt, 2013, p. xi), negotiation is strongly contingent on the exchange of information between the negotiation parties (Barry M. Goldman & Debra L. Shapiro, 2012). It is thus unsurprising that common negotiation tactics include the deliberate presentation of information to mislead the other negotiating party (Adler, 2007) through omission of critical information, commission of falsehoods (Schweitzer & Croson, 1999) or paltering (Rogers et al., 2017). These actions can be jointly categorised under an act of deception which involves the 'deliberate act taken by one party with the intention of creating or adding support to a false belief in another party' (Cramton & Dees, 1993, p. 362).

Outcome Interdependence

Outcome interdependence is defined as the extent to which team members believe that their personal benefits and costs are dependent on the successful goal attainment by other group members (Van Der Vegt et al., 1998). The way that outcomes are framed can lead to perceived high outcome interdependence or perceived low outcome interdependence (Wong et al., 2005). Outcome interdependence works on the assumption that group members are working together in a mixed motive situation where there are incentives to contribute to both the team's collective performance and the individual's performance (Schelling, 1980) .

Team members who perceive high outcome interdependence tend to assume that their individual outcomes are linked to the rest of the team members' such that the team swims or

sinks together and that the individual team members benefit from each other's performance (De Dreu, 2007). This is also known as team reward structures where the individual outcome is determined by the joint performance of the group (Beersma et al., 2013). Team members who perceive low outcome interdependence tend to assume that their individual outcomes are diametrically opposed to their team members' outcome such that when they swim, others sink, and vice versa (De Dreu, 2007). This is also known as individual reward structures where the individual outcome is determined by the performance of the individual (Beersma et al., 2013).

Hence, outcome interdependence is often conceptualized as the degree to which group members perceive the situation to have a predominantly team or individual reward structure (Beersma et al., 2013).

Deception as a tactic

Members of a team perceive high outcome interdependence when they believe that the attainment of other member's goals helps to facilitate movement towards the accomplishment of their goals (Van Der Vegt et al., 1998). Deustch (1949) found that when a team was presented with a team reward structure, team members tended to engage in more teamwork and displayed more mutually supportive behavior by looking out for the interests of other team members. Furthermore, situations that are perceived to have high outcome interdependency lead to more collaborative behaviour (Beersma et al., 2003; Beersma & De Dreu, 1999).

This increased interaction allows team members to learn from each other. Furthermore, team members who perceive high outcome interdependence believe that attainment of the group's goal is crucial to their own success goals (Van Der Vegt et al., 1998). As such, it would seem counterproductive for participants in a team reward structure

who perceive high outcome interdependence to engage in deception during the information sharing process as doing so would threaten the accuracy of the group performance.

However, there may be situations where deception may be conducive for members in teams with high outcome interdependence. Participants in a team reward structure who perceive high outcome interdependence believe that the individual's success is directly proportional to the quality of the group work (Van Der Vegt et al., 1998). This would suggest that individuals who perceive high outcome interdependence are focused on maximizing group performance.

Contrary to the self-interested deception where the deceiver seeks to increase their gains at the expense of the target, prosocial deception can comprise of altruistic lies (i.e. lies that disadvantage the deceiver but benefit the target; E. E. Levine & Schweitzer, 2015) or mutually beneficial lies (i.e. lies that benefit both the deceiver and the target; E. E. Levine & Schweitzer, 2015). As such, prosocial deception involves deception that benefits the target (E. Levine et al., 2018; E. E. Levine & Schweitzer, 2014, 2015). Engaging in prosocial deception could potentially be in line with the perception of a high outcome interdependence.

Firstly, prosocial deception have been shown to increase the trust the target of the deception has towards the deceiver (E. E. Levine & Schweitzer, 2015). Trust, in turn, facilitates information exchange (Butler, 1999), specifically the provision of information in a negotiation (Sinaceur, 2010). As such, participants in a team reward structure who perceive high outcome interdependence may choose to use prosocial deception as a tactic to increase the trust the other members of the party has in them.

Secondly, some studies have adopted an instrumental approach to deception (Koning et al., 2010, 2011; Steinel, 2015). This approach assumes that negotiators will use deception as a tactic in negotiation when it is the means that is most instrumental to their goal. Participants who perceive high outcome interdependence may use deception when it allows

them maximize their group performance. Mutually beneficial lies could help to maximize group performance as it benefits both parties in the group. Hence, the use of mutually beneficial deception may be in line with the goal of maximizing joint outcome.

Hypothesis 1: Individuals in a team reward structure who perceive high outcome interdependence are more likely to engage in prosocial (mutually beneficial) deception than individuals in an individual reward structure who perceive low outcome interdependence.

Members of a team perceive low outcome interdependence when they believe that the attainment of other member's goals is negatively related to the accomplishment of their goals (Van Der Vegt et al., 1998). This perception is usually due to an individual reward structure (Beersma et al., 2013). Due to this perception, participants in an individual reward structure may withhold valuable information from their group mates (Johnson et al., 2006). In some cases, they might even resort to impairing the progress of others in a bid to gain an advantage for themselves at the expense of the collective (Deutsch, 1949). This results in lower accuracy in the team performance of competitive groups (Johnson et al., 2006).

Little connection has been made between being in a low outcome interdependent situation and the use of deception to achieve their individual goals. However, evidence does suggest that individuals in a low outcome interdependent situation may resort to self-interested deception.

The willingness to impair the progress of others (Deutsch, 1949) suggest that individuals in an individual reward structure may be inclined to engage in deception which would benefit themselves at the expense of the target of the deception. Rewards for individual performance increase the likelihood that one will deceive and expect their opponent to deceive (Fulmer et al., 2009). When individuals have the goal of maximizing individual gains, they are more likely to lie and tend to lie more egregiously than when they have a cooperative goal (Schweitzer et al., 2005). Withholding pivotal information from team

members (Johnson et al., 2006) can be considered as an act of deception by omission. Self-interested deception has been categorized as actions that harm the target while benefitting the deceiver (Erat & Gneezy, 2012). Hence, it is hypothesized that participants who perceive low outcome interdependence are more likely to engage in self-interested deception.

Hypothesis 2: Participants in an individual reward structure who perceive low outcome interdependence are more likely to engage in self-interested deception than participants who perceive high outcome interdependence.

Method

To examine the influence of different outcome interdependence perceptions on the type of deception, participants are given a modified integrative negotiation task previously used by Olekalns and Smith (2009). The negotiation task was selected because it included an indifference issue for each of the negotiator. The indifference issue is an issue that carries no points for the participant. Usually in negotiation tasks, the options preferred by each party for the same issue are diametrically opposed. The indifference point would allow the participants to help the other party by changing the option decided to one that is more favourable without any cost to themselves.

Participants and Design

A sample of 230 of Singapore Management University students were recruited. After removing incomplete responses, data from a sample of 150 students (118 females and 32 males, 75 dyads) was used in this study. In compensation for completing the study, they were given either one Psychology study credit or $5 in cash. The dyads were randomly assigned to the high outcome interdependence (n = 40 dyads) or the low outcome interdependence (n = 35 dyads).

Procedure

The participants were randomly assigned into their condition and role. After being paired up, participants were given a Qualtrics link via email to complete the study. They were then given the instructions for the discussion task. The instruction differed based on the condition the participants were assigned to. Participants in the high outcome interdependence condition were told that the best performing pair will be given a reward whereas the low outcome interdependence condition were told that the best performing individual will be given a reward. The best performing dyads in the high outcome interdependence condition were given $20 each ($10 for each individual) while the best individual performers in the low outcome interdependence condition were given $10 each.

Below the information on the reward, participants were also reminded on their goals for this task. In the high outcome interdependence condition, participants were reminded that they should work together with their partner to achieve the best outcome for them and their partner while in the low outcome interdependence condition, participants were told that they need to negotiate with their opponent to achieve their own personal goal (Appendix A).

Participants were randomly assigned to the role of recruiter or applicant and were then given the simulated negotiation task (Appendix B). In the negotiation task, applicants had to negotiate three issues to join a high sought-after co-curricular activity while recruiters had to negotiate the same issues to recruit a new student (the applicant) into the co-curricular activity. The three issues were on the number of training hours the applicant had to partake in a week, the case competition the applicant is interested in and the start date of training. These negotiation issues were modified from Olekalns and Smith's (2009) task which involved eight issues.

Each issue had five options that the participants could negotiate on. Each option had a corresponding amount of points that would be awarded to the participants if their dyad was able to come to an agreement regarding the issue. The points offered for each option differed

for the recruiter and the applicant. In addition, of the three issues, one of the issue was an indifference issue. For the recruiter, the indifference point was the case competition and for the applicants, it was the start date.

Before negotiating, participants were asked to calculate the value of a hypothetical contract to practice their understanding of how the points were allocated. (Appendix C). Participants were then told to key in the minimum they will be willing to accept for each issue in the negotiation (Appendix D). They were assured that this information will not be sent to the other party.

Before entering the chat platform, participants were told not to share their payoff information or their personal information (e.g., name, age, gender) with their counterpart. They were also reminded of the reward that would be based on either their dyadic score (aggregate of both participants in the dyad) or their individual score, depending on the condition they were assigned to. The score for an individual was calculated by tallying up the points for each issue that the dyad agreed on. The scores for the dyad were calculated by aggregating the scores of both individuals in the dyad.

Participants were then given 15 minutes to negotiate on an online chat platform using Chatplat. The chat data was stored for analysis later. After the 15 minutes or after the participants had come to an agreement, they were directed to another page where they had to select the option they had agreed upon with their counterpart in the chat platform. If there was no agreement on any issue, they could select the option of "No agreement". Participants were then asked to fill out a questionnaire (Appendix E) regarding their deceptive acts. After that, they had to fill out a questionnaire regarding their perception of their counterpart's deceptive acts (Appendix F).

To ensure that the manipulation was successful, participants were directed to complete the Cooperative Orientation Scale and Competitive Orientation Scale (Appendix

G). Participants were reminded before completing the questionnaire to be truthful as the survey is anonymous and there will be no repercussions.

Lastly, participants had to complete a demographic survey (Appendix H). They were then debriefed.

Measures

Self-Rated Deception Scale

The self-rated deception scale consists of 12 items. Four items measured the participant's self-rating of the frequency they engaged in mutually beneficial deception during the negotiation, four items measured the participant's self-rating of the frequency they engaged in self-interested deception during the negotiation and the last four items measured the participant's self-rating of the frequency they engaged in altruistic deception during the negotiation. For each item, the response option ranged from 1 = "Not at all" to 6 = "Very Frequently".

Cronbach's alpha derived by analyzing the four items measuring mutually beneficial deception was 0.86. Cronbach's alpha derived by analyzing the four items measuring self-interested deception was 0.91. Cronbach's alpha derived by analyzing the four items measuring mutually beneficial deception was 0.86.

Other-Rated Deception Scale

The other-rated deception scale consists of 12 items. Four items measured the participant's perception of the frequency their counterpart engaged in mutually beneficial deception towards them during the negotiation, four items measured the participant's perception of the frequency their counterpart engaged in self-interested deception towards them during the negotiation and the last four items measured the participant's perception of the frequency their counterpart engaged in altruistic deception towards them during the

negotiation. For each item, the response option ranged from 1 = "Not at all" to 7 = "Very Frequently".

Cronbach's alpha derived by analyzing the four items measuring mutually beneficial deception was 0.86. Cronbach's alpha derived by analyzing the four items measuring self-interested deception was 0.92. Cronbach's alpha derived by analyzing the four items measuring mutually beneficial deception was 0.84.

Cooperative Orientation Scale

The cooperative orientation scale consists of four items which measured the participant's orientation to engage in cooperative behaviour with their counterpart. For each item, the response option ranged from 1 = "Strongly Disagree" to 7 = "Strongly Agree". There was one reversed score item in the scale.

Cronbach's alpha derived for the scale was 0.77.

Competitive Orientation Scale

The competitive orientation scale consists of four items which measured the participant's orientation to engage in competitive behaviour with their counterpart. For each item, the response option ranged from 1 = "Strongly Disagree" to 7 = "Strongly Agree". There was one reversed score item in the scale.

Cronbach's alpha derived for the scale was 0.71.

Results and discussion

As the individual observations within the dyad are not independent, the dyad is used as the unit of analysis (Beersma & De Dreu, 1999). An intraclass correlation was ran between the dyads for the Cooperative Orientation scores, $ICC(2, 1) = 0.30$, $ICC(2, 2) = 0.47$, $F(74, 74) = 1.88$, $p < 0.01$. Similarly, an intraclass correlation was also conducted between the dyads for the Competitive Orientation score, $ICC(2, 1) = 0.31$, $ICC(2, 2) = 0.47$, $F(74, 74) = 1.88$, $p < 0.01$. While the ICC scores did not meet the initially proposed standard of ICC1 >

0.12 (James, 1982) and ICC2 > 0.70 (Bliese, 2000), additional research suggests that in a negotiation research, the ICC score is not necessary to justify aggregating to the dyadic level, especially when the manipulation was conducted on the dyadic level (Beersma & De Dreu, 1999).. As such, the dyad was used as the unit of analysis for this paper. The dyadic score was calculated by aggregating the scores of the two participants in each dyad.

An independent samples t-test was conducted on the Cooperative Orientation Scale and Competitive Orientation Scale, which was used for manipulation check.

There was a significant difference in the competitive orientation scores for the low outcome interdependence group and high outcome interdependence group, $t(73) = 3.34$, $p < 0.01$. Dyads in the low outcome interdependence condition ($M = 4.40$, $SD = 1.00$) reported significantly higher competitive orientation sores than dyads in the high outcome interdependence condition ($M = 3.67$, $SD = 0.90$).

There was a significant difference in the cooperative orientation scores for the low outcome interdependence group and high outcome interdependence group, $t(73) = -4.59$, $p < 0.01$. Dyads in the high outcome interdependence condition ($M = 5.38$, $SD = 0.86$) have significantly higher cooperative orientation sores than dyads in the low outcome interdependence condition ($M = 4.45$, $SD = 0.88$). This suggests that the manipulation was successful.

To test the first hypothesis that participants who perceive high outcome interdependence are more likely to engage in mutually beneficial deception than participants who perceive low outcome interdependence, an independent T-test was first used to analyze the self-rated scale for mutually beneficial deception. Higher scores would indicate a greater extent of mutually beneficial deception in the negotiation.

There was a moderately significant difference in the scores on the mutually beneficial deception scores in the low outcome interdependence and high outcome interdependence

conditions, t(73) = 1.96, p = 0.05. However, contrary to the prediction, dyads in the low outcome interdependence group (M = 2.74, SD = 1.19) reported significantly higher mutually beneficial deception to the participants in high outcome interdependence group (M = 2.24, SD = 1.04).

To test the second hypothesis that individuals who perceive low outcome interdependence are more likely to engage in self-interested deception than individuals who perceive high outcome interdependence, an independent T-test was also used to analyze the self-rated scale for self-interested deception. Similarly, higher scores would indicate a greater extent of self-interested deception in the negotiation.

There was a significant difference in the self-rated scores on the self-interested deception scale, $t(73) = 2.40$, $p = 0.02$. Dyads in the low outcome interdependence group ($M = 2.68$, $SD = 1.24$) reported significantly higher self-interested deception compared to the participants in high outcome interdependence group ($M = 2.06$, $SD = 0.97$). This supports the hypothesis.
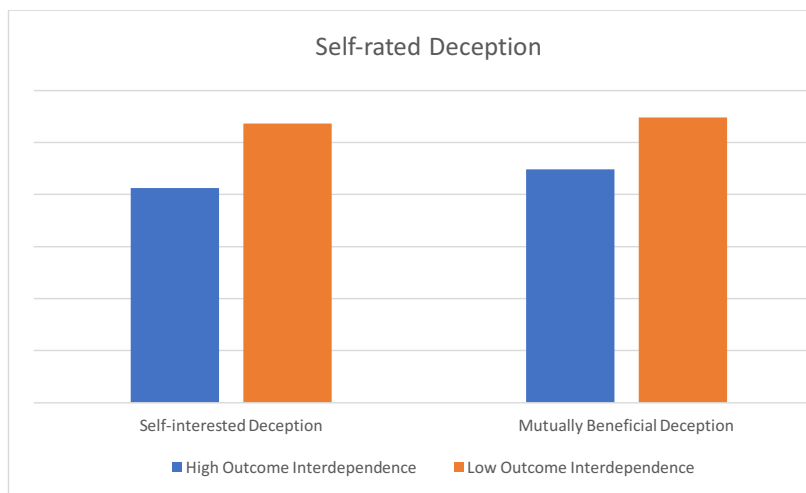

Fig 1. Results From Self-Rated Deception

An additional test was also run on the self-rated scores for altruistic deception. Again, the results showed that there was a significant difference in the self-rated scores for altruistic deception, $t(73) = 2.90$, $p < 0.01$, with dyads in the low outcome interdependence group ($M = 2.34$, $SD = 0.95$) reporting significantly higher scores for altruistic deception compared to dyads in the high outcome interdependence group ($M = 1.77$, $SD = 0.75$). These analyses suggest that participants in the low outcome interdependence tend to report higher cases of deceptions, across all three types studied in this paper, compared to participants in the high outcome interdependence group.

Table 1

Comparison of Self-Reported Deception Across High and Low Outcome Interdependence Groups

Type of Deception	Low Outcome Interdependence		High Outcome Interdependence		Sig	95% Confidence Interval	
	Mean	Standard Deviation	Mean	Standard Deviation		Lower	Upper
Mutually Beneficial	2.74	1.19	2.24	1.04	0.05	-0.01	1.02
Self-Interested	2.68	1.24	2.06	0.97	0.02	0.10	1.12
Altruistic	2.34	0.95	1.77	0.75	<0.01	0.18	0.96

In addition to using a self-rated scale, the chat between the dyads were also coded to analyse for forms of deception according to the coding scheme (Appendix I). The coding scheme required the coders to note the number of times participants engage in acts of mutually beneficial, altruistic and self-interested deception. An interrater reliability analysis was then conducted for the scores from the two blind raters using the intraclass correlation coefficient. The two blind raters scores had moderate inter-rater agreement for mutually beneficial, ICC(2, 1) = 0.35, ICC(2, 2) = 0.52, F(149, 149) = 2.08, p < 0.01. and self-interested deceptions ICC(2, 1) = 0.95, ICC(2, 2) = 0.97, F(149, 149) = 35.66, p < 0.01. For

the scores for altruistic deception, the interrater reliability analysis was not able to be conducted due to the low number of instances that were marked as an act of altruistic deception.

Three types of deceptions were coded – prosocial (mutually beneficial) deception, prosocial (altruistic) deception, self-interested deception. For self-interested deception, deceptive acts would entail acts where one party seeks to portray the "cost" of making concessions as greater than it actually is for them for diametrically opposed items. This can include making up false scenarios in a bid to convince their negotiating counterpart (e.g. "I need a higher performance bonus because I am the sole breadwinner") or lying about the points they will receive for a tier in an issue (e.g. "Agreeing to a 4% performance still gives me 0 points").

For altruistic deception, deceptive acts would entail acts where one party seeks to portray the "cost" of making concessions as less than it is for themselves for diametrically opposed items. By downplaying the impact the decision has on them, the individual can allow the counterpart to make the decision that would maximize his or her gains without concern for the individual. Hence, individuals may use this form of deception with the desire of helping their counterpart. This can include making up false scenarios in a bid to convince their negotiating counterpart that the concession was not that great (e.g. "Getting a high salary isn't that important to me because I am here for the experience") or lying about the points they will receive for a tier in an issue (e.g. "Getting a high salary isn't my top priority. You can decide on the salary.").

For mutually beneficial deception, deceptive acts would entail acts where one party provides or does not correct false information about the indifference issue. When one lies about the importance of the indifference issue (e.g. "I am actually very interested in starting in 6 weeks" for the applicant), the intention of the deceiver is likely to gain a boon in other

issues when they eventually concede the issue. Deceiving their counterpart about the importance of the issue and insisting on it gives them no benefit in terms of points. Hence, acts of deception for the indifference issue were likely done with the intention of making their eventual concession to their counterparts' demands seem greater than it actually is in the hopes of gaining a boon in another issue (e.g. "Since I conceded to your demands for starting time, let's agree on a better salary for me").

Deception on the indifference issues thus becomes a mutually beneficial form of deception because the individual is able to benefit through gaining an advantage in other issues while the counterpart is also able to get their demands met eventually. Deceptive acts would include making false statements or lying about the points they receive on the indifference issue.

After analyzing 10 chats, the coding scheme was edited to better describe the acts of deception that participants engage in (Appendix I). Two blind raters were tasked with coding the chats using the coding scheme. The two blind raters were instructed to first identify the acts of deception before reading through the rest of the chat to try to figure out the reason for the deception.

The scores of the two raters were then aggregated for each individual's deception rating. The individual ratings were subsequently aggregated for the dyad ratings.

An independent samples t-test was conducted on the aggregated dyadic ratings for mutually beneficial deception. Interestingly, there was no significant difference between the raters' count of mutually beneficial deception displayed by the dyads in the low outcome interdependence group and the dyads in the high outcome interdependence group $t(50.80) = 1.26$, $p = 0.22$. However, while the difference was not statistically significant, the dyads in the low outcome interdependence group ($M = 0.06$, $SD = 0.16$) were found by raters to

engage in acts of mutually beneficial deception more often than their counterparts in the high outcome interdependence group ($M = 0.02$, $SD = 0.09$).

An independent samples t-test was conducted on the aggregated dyadic ratings for self-interested deception. Similar to the results derived from the analysis of the self-rated scale, there was a significant difference between the raters' count of self-interested deception displayed by the low outcome interdependence group and high outcome interdependence group, $t(55.03) = 2.76$, $p < 0.01$. The low outcome interdependence group ($M = 1.63$, $SD = 1.71$) were found by raters to engage in acts of self-interested deception more often than their counterparts in the high outcome interdependence group ($M = 0.71$, $SD = 1.06$).
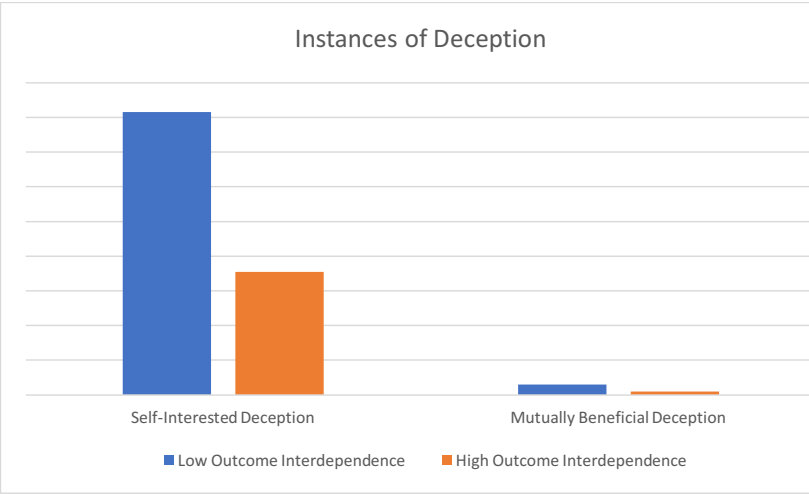
Fig 2. Expected Results From Coding of Negotiation

An independent samples t-test was conducted on the aggregated dyadic ratings for altruistic deception. There was no significant difference between the raters' count of altruistic displayed by the low outcome interdependence group and high outcome interdependence group, $t(39) = -1.36$, $p = 0.18$. While the difference was not statistically significant, dyads in the high outcome interdependence group ($M = 0.04$, $SD = 0.17$) were found by raters to engage in acts of altruistic deception more often than their counterparts in the low outcome

interdependence group ($M = 0.00$, $SD = 0.00$). However, it may be important to note that out of 75 dyads, only 2 dyads were found to exhibit altruistic deception.

Supplementary Analysis

As a supplemental analysis, the participants were also asked to rate if they perceived their counterpart to engage in mutually beneficial, self-interested or altruistic deception. The dyadic score was taken using an aggregate of the individual ratings. An independent sample t-test was then conducted on the scores.

There was a significant difference for mutually beneficial deception between the low outcome interdependence condition and the high outcome interdependence condition, $t(73) = 2.25$, $p = 0.03$. Participants in the low outcome interdependence group ($M = 2.69$, $SD = 1.23$) reported that their counterpart engaged in a significantly higher number acts of mutually beneficial deception compared to the high outcome interdependence group ($M = 2.11$, $SD = 1.02$).

There was also a significant difference for altruistic deception between the low outcome interdependence condition and the high outcome interdependence condition, $t(61.27) = 2.20$, $p = 0.03$. Participants in the low outcome interdependence group *($M = 2.26$, $SD = 0.98$)* reported that their counterpart engaged in a significantly higher number acts of altruistic deception compared to the high outcome interdependence group ($M = 1.82$, $SD = 0.71$).

Lastly, there was no significant difference for self-interested deception between the low outcome interdependence condition ($M = 2.79$, $SD = 1.43$) and the high outcome interdependence condition ($M = 2.33$, $SD = 1.27$), $t(73) = 1.47$, $p = 0.15$.

Additional analyses were conducted with gender and role as controls to see if there was a significant influence of the two variables on the results. As the study was conducted online using a chat platform, the gender of the other party in the negotiation was unknown to

the participants. As such, the analysis only focused on the gender of the participant. A one-way ANCOVA was conducted to examine the effect of outcome interdependence on the self-rated mutually beneficial deception scale scores using gender as a covariate. There was a significant difference in the scores from the self-rated mutually beneficial deception scale, $F(1, 147) = 7.73$, $p < 0.01$. Gender was not a significant covariate, $F(1,147) = 0.01$, $p = 0.94$. Similarly, a one-way ANCOVA was conducted to examine the effect of outcome interdependence on the self-rated self-interested deception scale scores using gender as a covariate. There was a significant difference in the scores from the self-rated self-interested deception scale, $F(1, 147) = 11.43$, $p < 0.01$. Gender was not a significant covariate, $F(1,147) = 0.40$, $p = 0.53$.

Next, a one-way ANCOVA was conducted to examine the effect of outcome interdependence on the rater's scoring for mutually beneficial deception using gender as a covariate. There was no significant difference in the rater's scoring for mutually beneficial deception, $F(1,147) = 3.42$, $p = 0.07$. Gender was also not a significant covariate, $F(1,147) = 0.10$, $p = 0.75$. A one-way ANCOVA was conducted to examine the effect of outcome interdependence on the rater's scoring for self-interested deception using gender as a covariate. There was a significant difference in the rater's scoring for self-interested deception scale, $F(1, 147) = 11.43$, $p < 0.01$. Gender was not a significant covariate, $F(1,147) = 0.40$, $p = 0.53$.

To control for role, a one-way ANCOVA was similarly used. There was a significant difference in the scores from the self-rated mutually beneficial deception scale, $F(1, 147) = 7.72$, $p < 0.01$. Role was not a significant covariate, $F(1,147) = 0.03$, $p = 0.85$. There was also a significant difference in the scores from the self-rated self-interested deception scale, $F(1, 147) = 11.56$, $p < 0.01$. Again, role was not a significant covariate, $F(1,147) = 0.05$, $p = 0.82$.

Next, the analysis was conducted on the rater's scorings for mutually beneficial and self-interested deception using role as a covariate. There was no significant difference in the rater's scoring for mutually beneficial deception, $F(1,147) = 3.42$, $p = 0.07$. Role was not a significant covariate, $F(1,147) = 0.10$, $p = 0.75$. There was a significant difference in the rater's scoring for self-interested deception scale, $F(1, 147) = 16.28$, $p < 0.01$. Role was not a significant covariate, $F(1,147) < 0.01$, $p = 0.98$.

General Discussion

While the prediction for self-interested deception was supported by the findings in both the self-rated scale and raters' coding of the chats, the prediction for mutually beneficial deception was not supported. Contrary to the prediction, participants in the low outcome interdependence group were more likely to engage in mutually beneficial acts of deception, compared to participants in the high outcome interdependence group.

This could perhaps be due to several reasons. Firstly, per the norms of reciprocity, the use of deception on a partner may increase when one perceives their partner to engage in deception during their interaction (Tyler et al., 2006).The findings show that participants in the low outcome interdependence condition were more likely to perceive that their counterpart was engaging in mutually beneficial and altruistic deception during their interaction. This perception could potentially explain why they "reciprocated" with more frequent acts of mutually beneficial deception to their counterpart as well. However, further studies would have to be conducted to determine if this is indeed the case.

Secondly, it is important to note that a significant difference was only found in the self-rated deception scale for mutually beneficial deception. Raters did not identify that there was a significant difference between the amount of mutually beneficial deception the low outcome interdependence group and high outcome interdependence group engaged in. This raises the possibility that the self-ratings of the participants in the low outcome

interdependence condition and the high outcome interdependence condition may have been skewed.

Deception is often viewed of as unethical, even in negotiation (Anton, 1990). While mutually beneficial deception might have intentions to benefit both parties, the act of deception by itself is still sometimes perceived as unethical. Competitive negotiators are more likely to see unethical behaviour as appropriate to use (Westbrook & Steven Arendall, 2010). Participants in the low outcome interdependence condition were manipulated into thinking that their rewards were based on the points they received as an individual. As such, it is reasonable to assume that they would be more competitive. This is supported by the manipulation check where participants in the low outcome interdependence condition scored significantly higher competitive orientation scale scores. Hence, it is possible that participants in the low outcome interdependence condition rated themselves as having exhibited more acts of mutually beneficial deception due to the act of deception, regardless of its intention, being perceived as unethical and, thus, more "acceptable" to do so only in a low outcome interdependent scenario.

Theoretical Implications

This study contributes to the research on deception in negotiation in a few ways. Firstly, much of extant literature on deception has focused only on self-interested deception (e.g. Aquino, 1998; Boles et al., 2000; Rogers et al., 2017; Roth & Murnighan, 1983; Steinel & De Dreu, 2004). Negotiation is a bargaining task in which parties with potentially conflicting goals bargain with the goal of attempting to ''…obtain a 'better' set of outcomes than they could achieve if they simply accepted what the other side would voluntarily give them'' (Lewicki & Stark, 1996, p. 71). As such, much research on deception in a negotiation context has placed an overwhelming focus on self-interested deception where deception is used as a tool to gain better outcomes for the deceiver at the expense of the victim. Recent

Deleted: Secondly, another possible reason for the exhibition of higher mutually beneficial deception among participants in the low outcome interdependence condition could be due to trust. Low outcome interdependence has been shown to lead to lower levels of trust between counterparts(Beersma & De Dreu, 1999). This is also suggested in this study's findings that participants in the low outcome interdependent group perceived greater deception from their counterparts. Deception is most likely to occur when negotiators report low trust (Olekalns & Smith, 2009). As such, one of the possible reasons for higher mutually beneficial and self-interested deception in the low outcome interdependence group, could be the mediating effect of trust.

papers have pointed out the need to examine deception more holistically by including different forms of deceptions, apart from the traditional informational self-interested deception, in a negotiation context (Gaspar et al., 2019; Gunia, 2019). This paper seeks to provide an empirical answer to these papers by studying the antecedents of self-interested, mutually beneficial and altruistic deception in negotiation. '

The need to consider the different types of deceptions is further highlighted when the results of this study is taken into account. The findings from the self-rated scale suggest that participants in a low outcome interdependence situation tend to engage in more acts of deception. This trend was also found in the raters' coding of the chat groups, though the difference for mutually beneficial was not statistically significant. Hence, the findings seem to suggest that while participants in a low outcome interdependence condition do engage in more self-interested deception, they also do engage in more prosocial deception that are altruistic or mutually beneficial. Simply narrowing in on self-interested deception might result in an overly myopic view when studying the role of deception in negotiation.

This paper also teases apart the influence of task interdependence and outcome interdependence on collaborative and competitive behaviour. A common criticism of studies on outcome interdependence is that it is often conflated with task interdependence (Van der Vegt & Van de Vliert, 2002). Task interdependence refers to the extent to which team members must share materials, information and expertise in order to achieve the desired performance (Chen & Tjosvold, 2008). This is different from outcome interdependence which focuses on the extent to which the success of the individual is linked to the performance of other team members. As the same negotiation task was used for both conditions in the study, this study will be able to study the influence of outcome interdependence alone without the influence of task interdependence. The results suggest that

outcome interdependence alone is enough to influence one's behaviour in a negotiation exercise.

Practical Implications

Rewards are ubiquitous in almost all organizations (Bartol & Srivastava, 2002). Selecting the appropriate reward structure would influence team members perception of outcome interdependency. There are tradeoffs with selecting either a cooperative or competitive reward structure (Gerhart et al., 2009). In order to select an appropriate reward structure, companies must have a clear understanding of the type of behaviours and results that different reward structures promote.

The findings of this study suggest that low outcome interdependency tend to promote higher acts of mutually beneficial deception and self-interested deception. By drawing the link between outcome interdependency and the use of deception tactics, this paper highlights a new important consideration that organizations must take into account when choosing to apply different team reward structures.

Limitations and Future Research

The current study is not without limitations, and additional research is needed to refine and extend this research in important ways. Firstly, this study is limited to studying only informational deception. A vast majority of research on deception in negotiation tends to focus only on informational deception (Fulmer et al., 2009). While this paper has sought to expand on the current literature on deception, it is by no means a complete picture of deception. Other forms of deception such as emotional deception are out of the scope of this paper. In recent years, there has been a call for more research on emotional deception (Fulmer et al., 2009; Gaspar & Schweitzer, 2013). Emotional deception is typically viewed as more ethically acceptable compared to informational deception (Fulmer et al., 2009). As such, individuals may be more inclined to engage in emotional deception compared to

informational deception. Future research can look at the effects of outcome interdependency on both informational and emotional deception and if there are any differing patterns between the two.

Secondly, this study is conducted using an online chat platform. This results in limited media richness. Media richness is defined as the ability of a communication medium to transmit different types of information from sender to receiver (Daft & Lengel, 1986). An online chat platform is likely to provide a greater sense of anonymity compared to face-to-face discussion. This perceived anonymity might afford individuals the opportunity to behave in ways that would normally be seen as unacceptable (Drouin et al., 2016; Rockmann & Northcraft, 2008). Hence, the patterns of deception observed in this study may deviate from patterns of deception in a face-to-face negotiation. Future research may wish to include face-to-face negotiations or on mediums with greater media richness.

Thirdly, the manipulation check questions might have been inadequate in providing a clear picture on the participant's understanding of the outcome interdependence. While the items did attempt to measure the participant's goals and motivations during the negotiation task, a clearer and more direct manipulation check question could have been used by simply asking the participant how their points were judged – by individual points or by dyadic points.

Lastly, the item "I engaged in some form of deception that would benefit myself without harming my counterpart" in the self-rated mutually beneficial deception scale might not have adequately conveyed the intention to benefit both parties. Nonetheless, the internal reliability of the scale decreased when the item was removed with the Cronbach's alpha dropping to 0.76. Additional analysis was conducted to ensure that the results of the analysis remained consistent even with the removal of this item. An independent samples t-test was conducted using the mutually beneficial deception scale score which was derived from the aggregate of

the remaining three items. Similar to the previous findings, there was a significant difference in the mutually beneficial scores, $t(73) = 2.05$, $p = 0.04$.

Conclusions

Reward is a very important component in organizations. This study sought to extend research on the implications of adopting different reward structures by demonstrating the link between the outcome interdependency and the different types of deception. While previous studies tended to assume that deception was used in negotiation as a tool for self-interested gains, the findings suggests that there may be other factors that influence the act of deception. Future research should look to explore the link between outcome interdependency and the forms of deception in greater depth and using other forms of media.

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Appendix A

Instructions (Manipulation)

High Outcome Interdependence Condition

The best performing dyads will receive a cash reward of $10 for each individual in the dyad.

The best performing dyads will be determined by the **joint points** (calculated by adding your

partner and your points) achieved by each dyad.

Please remember that the goal of this discussion is to work together with your partner

to achieve the best outcome for both you and your partner.

Low Outcome Interdependence Condition

The best performing individuals will receive a cash reward of $10.

The best performing individuals will be determined by the **individual points** they achieve

during the negotiation.

Please remember that the goal of this negotiation is to negotiate with your opponent to

achieve the best outcome for yourself.

Appendix B

Applicant Information

Contract Information.

You have entered Singapore Management University and have decided to join a co-curricular activity (CCA). After looking through the CCAs offered in SMU, you decide to apply to join a prestigious business case club – Consultancy Masters. The club is a highly reputable CCA and has won multiple high-profile international competitions. You have applied for positions in several CCAs, but are particularly drawn to this club.

You have just received notice that Consultancy Masters is strongly considering you as their new trainee. However, you will have to negotiate with a member of Consultancy Masters' Executive Committee (ExCo) on the details of your training contract as a new member. You are fairly certain that you will accept this position, but your final decision depends on today's discussion. Your aim in this discussion is to determine the exact details of your training with the ExCo. The discussion will specify: hours of training each week, start date, case competition you will join next year.

Your position

You have previously competed and won numerous case competitions. You know that past students with your qualifications have had no difficulties in joining another business case club. Although you are especially interested in Consultancy Masters, you know that if you do not conclude this discussion successfully, there are many other clubs who would offer you a position. Consequently, whether you accept the offer depends on the contract terms that you discuss today.

The Standard Offer

Two weeks ago, you received a standard offer from Consultancy Masters:

10 hours of training a week and the expectation that you will start in 6 weeks.

This offer seems a little undesirable to you. You've done some research on what other clubs are providing new trainees of your experience and expertise.
Based on your own research and advice from your seniors, you had expected to be offered

Case Competition E and 2 hours of training a week.

Today, you are meeting with a member of the club's ExCo to discuss the offer.
You fully expect that you will be asked the kind of training you want and are prepared for it. You are mindful that although Consultancy Masters is your preferred CCA, there are several comparable CCAs who would be willing to recruit you. You already have had preliminary contact from several of these clubs. If today's discussion fail, you plan to contact them.

Contract Options & Value.

These issues are listed on the next page. As you know, contracts will vary in how much value they have for you. You have 5 options for each issue that you must discuss, and the options vary in their value to you. The chart on the next page shows you the value of each option.

Do NOT SHOW this information to your recruiter.

Issues	Best contract for you	Worst contract for you
Weekly Training Hours	2	10
Case Competition	E	A
Start date	You are not concerned about the **start date of the training.**	

You can calculate the value of your contract by adding up the points. The higher the points, the better the contract.   You would like to join Consultancy Masters and you have flexibility in what you are willing to accept.

It is in your interests to reach settlement in the next 15 minutes

REWARD STRUCTURES AND NEGOTIATION STRATEGIES

You have to resolve three issues:

Weekly Training Hours: As you are currently taking 5 difficult modules, you are hoping to persuade Consultancy Masters to reduce your weekly training hours as much as possible.

Start Date: You have no other commitments for this semester and can start training at any time.

Case Competition: You have heard that Consultancy Masters will be joining several case competitions next year. Because of your background and skills, you have a very strong preference to join Case Competition E.

Case Competition	Applicant	Start Date	Applicant	Weekly Training Hours	Applicant
A	000	In 6 Weeks	000	10	000
B	1,000	In 5 Weeks	000	8	600
C	2,000	In 4 Weeks	000	6	1200
D	3,000	In 3 Weeks	000	4	1800
E	4,000	In 2 Weeks	000	2	2400

Recruiter Information

Contract Information.
You are the Human Resource Director of a prestigious business case club Co-curricular activity in Singapore Management University – Consultancy Masters, which has won multiple high-profile international competitions. You are trying to recruit a new trainee to join your club. After considering all of the applications, you are especially interested in recruiting the person you are about to discuss with.

You are fairly certain that you will recruit this applicant, but your final decision depends on today's discussion. Your aim in this discussion is to determine the exact details of the training contract with your new recruit. The contract will specify: hours of training each week, start date, case competition you will join next year.

Your position
Your club has a very strong reputation in SMU and is highly sought after as a Co-Curricular Activity (CCA). For several years now you have successfully recruited high-calibre trainees from the new batch of freshmen. Although this candidate is your first choice, he/she is not the only person to meet your criteria. Consequently, whether you recruit this particular candidate depends on the training terms that you discuss today.

Your Standard Offer
Two weeks ago, you sent this job candidate your standard offer:

10 hours of training a week and the expectation that this candidate will start in 6 weeks.

Although this is your preferred candidate, there are several other well-qualified freshmen you would be willing to recruit. Although you prefer today's candidate, you have a pool of comparably-qualified applicants on your short-list. If today's discussion fail, the first person on that short-list would receive the same standard offer you have made to today's candidate.

Contract Options & Value.

These issues are listed on the next page. As you know, contracts will vary in how much value they have for you. You have 5 options for each issue that you must discuss, and the options vary in their value to you. The chart on the next page shows you the value of each option that you have.

Do NOT SHOW this information to your recruit.

Issues	Best contract for you	Worst contract for you
Weekly Training Hours	10	2
Start Date	6 weeks	**2** weeks
Case competition	You are not concerned about which **case competition team** the candidate joins.	

You can calculate the value of your contract by adding up the points. The higher the points, the better the contract. You would like to recruit this applicant and you have flexibility in what you can offer him/her.

It is in your interests to reach settlement in the next 15 minutes

You have to resolve three issues:

Weekly Training Hours: Consultancy Masters new recruits typically undergo 10 hours of training a week.

Start Date: As the senior members of your club are currently preparing for this year's case competition, the availability of senior members to act as trainers to new trainees is severely limited at this point. The last competition for all senior members will end in 6 weeks. As a result, you hope to start this applicant 6 weeks from today.

Case competition: You expect that the applicant is likely to state their case competition preference. This is not an issue that concerns you, since you have vacancies in the teams for all the upcoming competitions.

Case Competition	Recruiter	Start Date	Recruiter	Weekly Training Hours	Recruiter
A	000	In 6 Weeks	1,200	10	2400
B	000	In 5 Weeks	900	8	1800
C	000	In 4 Weeks	600	6	1200
D	000	In 3 Weeks	300	4	600
E	000	In 2 Weeks	000	2	000

Case Competition	Recruiter	Start Date	Recruiter	Weekly Training Hours	Recruiter
A	000	In 6 Weeks	1,200	10	2400
B	000	In 5 Weeks	900	8	1800
C	000	In 4 Weeks	600	6	1200
D	000	In 3 Weeks	300	4	600
E	000	In 2 Weeks	000	2	000

Appendix C

Sample Questions For Calculation of Points

Based on the information provided in the handout, please calculate and enter in the box

below the points you will receive if you choose to accept the following contract.

Issues	
Weekly Training Hours	8
Start Date	4 Weeks
Case competition	B

Appendix D

Acceptable Range

Based on the information provided in the handout, please calculate and select the minimum level you are willing to accept for the **weekly training hours.** This information will __not__ be given to your partner.

1. 10 hours
2. 8 hours
3. 6 hours
4. 4 hours
5. 2 hours

Based on the information provided in the handout, please calculate and select the minimum level you are willing to accept for the **start date.** This information will __not__ be given to your partner.
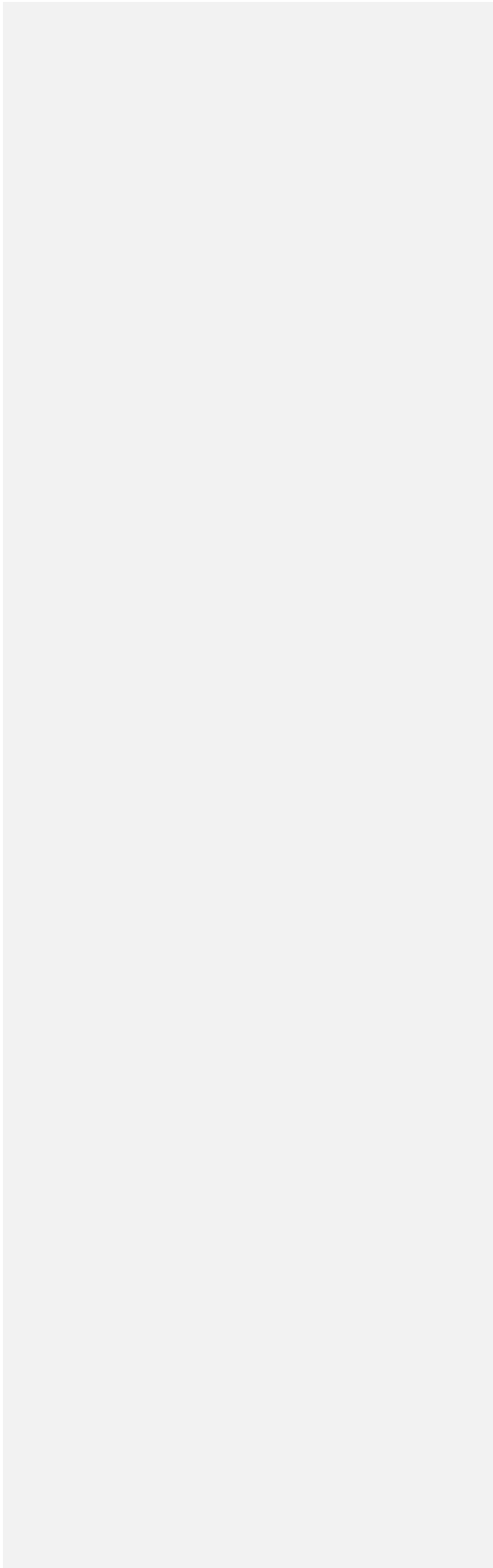
1. In 6 Weeks
2. In 5 Weeks
3. In 4 Weeks
4. In 3 Weeks
5. In 2 Weeks

Based on the information provided in the handout, please calculate and select the minimum level you are willing to accept for the **case study.** This information will __not__ be given to your partner.

1. A

2. B
3. C
4. D
5. E

Appendix E

Self-Rated Deception Scale

Instructions

Please complete the scale honestly as all responses from this survey will be kept anonymous.

You will **NOT** lose any points from your negotiating task for your responses here. Your

interaction with your negotiating counterpart has also been recorded. Hence, please ensure

that your responses are truthful and accurate.

Deception Type		Not at all			Very Frequently		
		1	2	3	4	5	6
Prosocial (Mutually Beneficial) Deception	I gave my counterpart false information to benefit both my counterpart and myself						
	I did not correct any false information my counterpart may have with the intention of benefitting both my counterpart and myself						
	I engaged in some form of deception that would benefit myself without harming my counterpart						
	I made up a situation that was not explicitly given in the handout with the intention of mutually benefitting my counterpart and myself						
Prosocial (Altruistic) Deception	I gave my counterpart false information to benefit my counterpart at the expense of myself						
	I did not correct any false information my counterpart may have with the intention of benefitting my counterpart at the expense of myself						
	I engaged in some form of deception that would benefit my counterpart at the expense of myself						

	I embellished my situation with information that was not explicitly given in the handout with the intention to benefit only my counterpart
Self-interested Deception	I gave my counterpart false information to benefit myself at the expense of my counterpart
	I did not correct any false information my counterpart may have with the intention of benefiting myself at the expense of my counterpart
	I engaged in some form of deception in order to benefit myself at the expense of my counterpart
	I made up information about my situation that was not explicitly given in the handout that would benefit myself at the expense of my counterpart

Appendix F

Other-Rated Deception

Instructions

Please complete the scale honestly as all responses from this survey will be kept anonymous.

You will **NOT** lose any points from your negotiating task for your responses here and your

counterpart will **NOT** be aware of the responses you give here. Your interaction with your

negotiating counterpart has also been recorded. Hence, please answer the following questions

based on your interpretation of your counterpart's actions.

Deception Type		Not at all 1 2 3 4 5 6 7	Very Frequently
Prosocial (Mutually Beneficial) Deception	My counterpart gave false information to benefit both parties		
	My counterpart did not correct any false information I may have with the intention of benefitting both of us		
	My counterpart engaged in some form of deception that would benefit them without harming me		
	My counterpart made up a situation that was not explicitly given in the handout with the intention of mutually benefitting both of us		
Prosocial (Altruistic) Deception	My counterpart gave me false information to benefit me at the expense of themselves		
	My counterpart did not correct any false information I had with the intention of benefitting me at the expense of themselves		
	My counterpart engaged in some form of deception that would benefit me at the expense of themselves		

	My counterpart embellished their situation with information that was not explicitly given in the handout with the intention to benefit only me
Self-interested Deception	My counterpart gave me false information to benefit themselves at the expense of me
	My counterpart did not correct any false information I had with the intention of benefiting themselves at the expense of me
	My counterpart engaged in some form of deception in order to benefit themselves at the expense of me
	My counterpart made up information about their situation that was not explicitly given in the handout that would benefit themselves at the expense of me

Appendix G

Manipulation Check (Competitive Orientation Scale)

Based on your interaction with your partner, please answer the following items accurately.

You will **NOT** lose any points from your negotiating task for your responses here and your

counterpart will **NOT** be aware of the responses you give here. All responses will be kept

anonymous.

	Strongly Disagree				Strongly Agree		
	1	2	3	4	5	6	7
When I discussed the terms of my contract, I was competing with my partner							
During the discussion, it was important to achieve as much points as possible for myself							
The goal of the discussion was to achieve more points than my partner							
It was important to ensure that my partner is satisfied with his/her points (Reversed Scored Item)							

Manipulation Check (Cooperative Orientation Scale)

	Strongly Disagree				Strongly Agree		
	1	2	3	4	5	6	7
When I discussed the terms of my contract, I was cooperating with my partner							
During the discussion, it was important to achieve as much points as possible for the team							
It was alright if my partner had more points than me if my concession meant more points for the team overall							

It was important that I score more
points than my partner (Reversed
Scored Item)

It was important that I score more
points than my partner (Reversed
Scored Item)
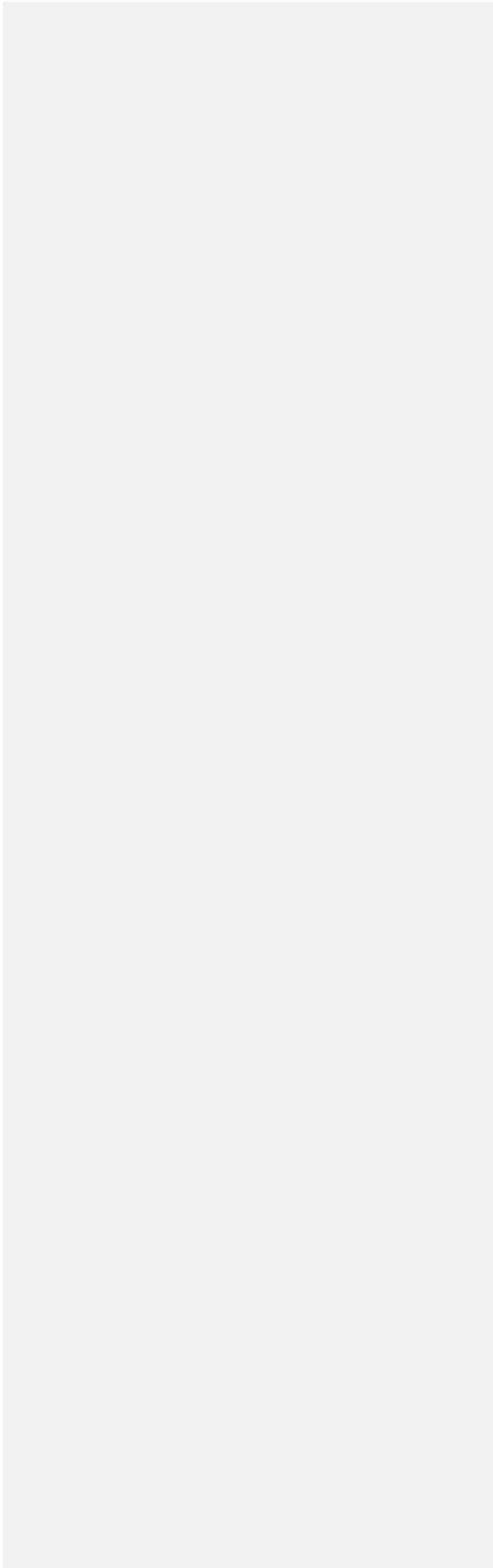
Appendix H

Demographic Survey

1. Please indicate your dyad number (assigned in the email) in the box below.

2. Please indicate your age.

3. Please indicate your gender.

4. Please indicate your faculty and major in the box provided below

5. Please enter the number of years of negotiating experience you have in the box below.

6. Please enter your school email below.

Appendix I

Coding Scheme

Deception Type	Behaviours in the Deception Type
Prosocial (Mutually Beneficial) Deception	Making false statements to generate mutually beneficial decisions (benefit both)
Prosocial (Altruistic) Deception	Making false statements meant to benefit the other party at the expense of themselves
Self-interested Deception	Making false statements meant to benefit themselves at the expense of the other party

Table 2

Means, standard deviations, and correlations with confidence intervals for dyadic scores

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.Condition	1.53	0.50	1.00																
2.Role	1.50	0.50	0.00	1.00															
3. Dyadic Competitive Orientation Score	4.01	1.00	-0.36[b]	0.02	1.00														
4. Dyadic Cooperative Orientation Score	4.95	0.98	0.47[b]	-0.02	-0.77[b]	1.00													
5. Dyadic Mutually Beneficial Deception Score (Self-Rated Scale)	2.47	1.13	-0.22[b]	0.02	0.51[b]	-0.35[b]	1.00												
6.Dyadic Altruistic Deception Score (Self-Rated Scale)	2.04	0.89	-0.32[b]	0.02	0.41[b]	-0.38[b]	0.80[b]	1.00											
7.Dyadic Self-Interested Deception Score (Self-Rated Scale)	2.35	1.14	-0.27[b]	0.02	0.52[b]	-0.42[b]	0.87[b]	0.79[b]	1.00										
8.Dyadic Mutually Beneficial Deception (Aggregated Rater's Score)	0.04	0.13	-0.15	0.03	-0.01	-0.05	0.12	0.13	0.18[a]	1.00									
9. Dyadic Altruistic Deception (Aggregated Rater's Score)	0.02	0.13	0.15	0.00	-0.03	0.10	0.04	0.00	-0.03	-0.05	1.00								

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
10. Dyadic Self-Interested Deception (Aggregated Rater's Score)	1.14	1.46	-0.32[b]	0.00	0.46[b]	-0.38[b]	0.56[b]	0.54[b]	0.57[b]	-0.08	-0.10	1.00							
11. Dyadic Mutually Beneficial Deception Score (Other-Rated Scale)	2.38	1.15	-0.26[b]	0.02	0.52[b]	-0.52[b]	0.73[b]	0.67[b]	0.73[b]	0.20[a]	-0.02	0.43[b]	1.00						
12. Dyadic Self-Interested Deception Score (Other-Rated Scale)	2.55	1.35	-0.17[a]	0.02	0.51[b]	-0.49[b]	0.76[b]	0.70[b]	0.73[b]	0.14	-0.04	0.52[b]	0.86[b]	1.00					
13. Dyadic Altruistic Deception Score (Other-Rated Scale)	2.03	0.87	-0.25[b]	0.03	0.46[b]	-0.45[b]	0.68[b]	0.80[b]	0.74[b]	0.11	-0.01	0.53[b]	0.77[b]	0.75[b]	1.00				
14. Dyadic Points	2721.33	1275.30	0.29[b]	0.01	-0.28[b]	0.39[b]	-0.32[b]	-0.33[b]	-0.26[b]	-0.05	0.05	-0.32[b]	-0.37[b]	-0.35[b]	-0.36[b]	1.00			
15. Age	21.53	1.59	0.02	0.03	-0.07	0.07	-0.11	-0.08	-0.04	0.05	0.06	0.00	-0.07	-0.12	-0.09	0.05	1.00		
16. Gender	1.21	0.41	-0.04	0.03	0.09	-0.02	0.00	0.02	0.06	0.01	-0.02	0.05	0.05	0.08	0.03	0.03	0.44[b]	1.00	
17. Years in Negotiating Experience	2.49	6.33	-0.05	-0.07	0.02	-0.02	0.05	0.04	0.00	0.03	-0.05	0.14	0.16[a]	0.02	0.08	-0.03	0.07	-0.07	1.00

[a] $p < 0.05$ Correlation is significant at the 0.05 level (2-tailed)
[b] $p < 0.01$ Correlation is significant at the 0.01 level (2-tailed)